BRUHAT BANGALORE MAHANAGARA PALIKE

Dasarahalli Zone, Electrical Division

Name of work :- **Modified Estimate For** Providing LED Street lights/Poles/Control switches/control wires at Dark/volernabal places in Ward no 12

Budget Head 1808

Ward No.12 Estimate No.. 14 24145254.24

No	SR PAGE NO	Description Of Work	Unit	Qty	Rate	Amount
1	66/12.8.4	Supply of LED Streetlight luminaire with pressure die cast aluminium housing body for optimal thermal dissipation Lamp compartment comprising of anti glare clear diffuser with Injection moulded polycarbonate material, delivering superior light output Rated life Burning Hrs 50000 hr @ Lumen Maintenance of 70%, maximum light intensity should be between 60 degrees to 70 degrees CCT > 5500K, IP 66 optical and electrical compartment & impact resistance of complete luminaire > IK08 Power Factor >0 9 with mains, Surge Protection-Min 5KV along with Over voltage/ Overload, short circuit/ miss-wiring protection Compatible for pole mouting with outer dia of 40mm to 50mm Universal Voltage driver to operate wide voltage range from 100V to 270V 50/60Hz application Compliance to IS 10322/IEC 60598, LM 79 & LM 80 Adherence with RoHS UL approved MCPCB Top access street light with single screw to ensure ease of maintenance at the sight site location with minimized minimal tools LED Light fixture with W System Powerconsumption LED Efficiency>130lm/w, nominal CRI >75 Luminaire manufacturer should have in-house facility accredited by NABL/CPRI & any Government certified agency & Design & Development facility certified by ISO 9001 2008 Housing with supplier word mark /name shall be Engraved / Embossing on the die cast housing/ Body part Warranty of 2 Years against any manufacturing defect working under standard electrical conditions as mentioned above should be given by LED manufacturer & Cree/Nichia/ Lumileds/Osram make LED Source LED Streetlight 90 Watts	Nos	1800 00	7625 4	13725720
2	13/4 1.1	Fabricating supplying and erecting swaged tubular pole of height Mtr having three sections and providing two coats of red oxide paint and finished with two coats of enamelled paint of approved quality and colour and M S base plate of suitable size welded at the bottom of the pole(as per IS) and 40mm dia GI / flexible PVC pipe of 1 mtr length fitted to the heavy gauge polycarbonate control box including 5way connector of size 167x125x82mm for 7 5M pole/200x160x98mm for remaining length of pole with front opening cover, with locking arrangements and suitable capacity MCB / DP switch, The pole shall be erected in cement concrete work (1 2 4) including excavation and refilling of planting depth of the pole to the ground level and the coping CC shall be up to 0 6M above ground level as per IS 2713 - 7 Erection of heavy duty pole on Footpath / median 9Mt (5Mt Hb 165 1mm dia 4 85mm thick x2M Hm 139 7mm dia 4 50mm thick x 2M Ht,114 3mm dia 3 65mm thick) as per IS 410 SP 32	Nos	106 00	14058	1490148
3	16/4 7.2	Supplying and fixing of Hot dip Galvanized M S Bracket suitable for out door luminaries and mounted on Octagonal pole using necessary bolts, nuts etc., complete Single Arm Bracket with 1500mm Standard 40/50MM dia	Nos	106 00	2249 28	238424
4	79/14 5	Fixing halogen/metal halide / SVL / IL / LED floodlight fitting over existing pole / wall ceiling including clamps, bolts, nuts and wiring using suitable capacity wires	Nos	1800 00	186 38	335475
5	79/14.1.2	Supplying and Fixing of mm dia class A GI pipe bracket up to 2 Mtrs long bent at suitable angle and fixing to this bracket 1x40/2x40 watts fluorescent tube street light fitting of all capacities to GI or CI or rail or RCC pole / wall using suitable clamps bolts, and nuts and wiring using suitable capacity wires Using 32mm dia G I Pipe	Nos	1750 00	889 28	1556231
6	40/9.4.4	Supplying of 1 1 KV LT UG cable XLPE or Heat resistant PVC insulated PVC extruded inner sheath armoured UG LT cable as per IS-1554 (Part-I) or IS-7098 Part-1 Armouring strip thickness in average +5% and resistivity 14 Ohms/Kms (Max) as per IS-3975 4 core 16 sqm.n	Nos	1200 00	159 75	191700

Scanned by CamScanner

7	7.2.7/2.7.1	Wiring for lighting/power circuit using one of PVC insulated 1100V grade, stranded Aluminium wire single core in open or concealed system of wiring 4 sqmm	Mtrs	4900 00	9 59	46967
8	40/6.4.5	Supplying of 1.1 KV LT UG cable XLPE or Heat resistant PVC insulated PVC extruded Inner sheath armoured UG LT cable as per IS-1554 (Part-1) or IS 7098 Part-1 Armouring strip thickness in average +5% and resistivity 14 Ohms/Kms (Max) as per IS-3975 3.5 core 25 sqmm	Mtrs	678 00	191 7	129973
9	41/6.5.1	Labour charges for laying of 1.1 KV class UG cable in existing trench GI pipe / stoneware pipe / on wall / on pole as required 6 sqmm to 16 sqmm	Mtrs	1200 00	12 65	15183
10	41/6.5.2	Labour charges for laying of 1.1 KV class UG cable in existing trench GI pipe / stoneware pipe / on wall / on pole as required 25sqmm to 75 sqmm	Mtrs	678 00	16 51	11192
11	41/6.6.1	Digging of trench of 0.6m deep x 0.50 mtr wide refilling the trench to the required ground level and consolidating etc., complete (As per Civil SR KSRB I-2 P-7)In soil (ordinary)	Mtrs	1000 00	80 94	80940
12	42/6.1	Supplying fixing wiring earth electrode for grounding conduits, I.C. cutouts and other equipment's on the meter board using 40mm dia 2.90mm thick GI pipe 2.5 mtr long buried in a pit The pit should be filled with equal proportion of salt and charcoal 150mm all-round the pipe to complete depth The connection from the pipe to the conduit etc is to be established through GI wire of size as per ISI specification 7.3.3 of IS 732 using 12mm dia bolts, nuts, washers and check nuts etc., the pipe shall have 16 through holes of 12 mm dia	Mtrs	8 00	3194 68	25557
13	43/6.3.1	Supplying and running of GI/Copper strips for grounding connections using necessary fixing materials as required 25x3mm GI strip	Mtrs	40 00	79 88	3195
14	30/5.42.2	Fabricating supplying and mounting MS box made out SWG suitable for floor / wall mounting fully weather proof with provision for better heat dissipation, provided with hinged front cover, equipped with tamper proof locking arrangements with suitable size clamps with necessary cable entry pipe with gland and box should be finished with 7tanks treatment with powder coated paint and finally finished with approved colour etc., complete 16SWG	Mtrs	245000 00	0 37	91324
15	30/5.41.1	Supplying and fixing angle iron frame work fabricated out of M.S. angle iron and M.S. flat with bolts, washers etc., and painted with 2 coats of red oxide and then two coats of approved paint 40x40x6mm	Nos	25 00	271 58	6789
16	27/5.14.7	Supplying and fixing Moulded Case Circuit Breaker (MCCB) over the existing wood panel board using necessary screws, bolts, nuts, necessary phase separators handle and wiring complete Protection of Overload and Short circuit with thermal Magnetic/Micro processor release and Earth Fault as per IS-13947 (Icu = Ics)FOUR POLE 100Amps 25kA	Nos	7 00	6816	47712
17	32/5.48	Supplying and fixing Microprocessor Based Astronomical timer Switch with using necessary bolts, nuts and washers	Nos	7 00	4291 95	30044
18	28/5.13.4	Supply and fixing of 4pole power contactor with NO/NC contacts on existing wood/panel board using necessary bolts, nuts, washers and wiring etc complete with AC-3 Rating and as per IS-13947 100 to 125Amps	Nos	7 00	7668	53676
19	27/5.17.9	Supplying and fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and 'C' Type curve, indicator ON/OFF energy cross-3 with Short circuit breaking capacity of 10K and complete wiring as required confirming to IEC 60898 50-63Amps TPN	Nos	10 00	2552 81	25528
20	16/3.8	Supplying 4mm thick plastic sheet with necessary nitches for fixing switches regulators etc. and fixing on existing wooden or metal box using N.T. screws	Sqcms	70000 00	0 29	20129
21	6/2.5.2	Supplying and drawing Flexible Multicore Cable manufactured with electrolytic grade flexible copper with low conductor confirming to IS 8130-1984 and (Virgin) PVC insulation sheathed suitable for working voltage upto 1100Volts as per IS-694 1990 3C X 1.5Sq mm	Mtrs	250 00	58 58	14644
22	6/2.3.3	Wiring for lighting/power circuit using one of FRLS PVC insulated 1100V grade multistrand copper wire with low conductor resistance single core in open or concealed system of wiring with specified IS-694 conforming to latest amendments 6 sqmm	Mtrs	62 00	74 55	4622
		Supplying tinned copper lugs and crimping and wiring to terminal point for wire of the following sizes a) 1.5 sqmm	Nos.	150·00	3·195	479·25

ting LED Street lights / Poles / C...

Scanned by CamScanner

	17 4	b) Supplying tinned copper lugs and crimping and wiring to terminal point for wire of the following sizes0 Sqmm	Nos	120 00	7 46	895
	17 6	c) Supplying tinned copper lugs and crimping and wiring to terminal point for wire of the following sizes16 Sqmm	Nos	600 00	13 25	7949
	6 9 1	Supplying and fixing of class A (medium duty) GI pipe of wall thickness not less than 3 25mm on pole/wall/drain crossing with necessary clamping arrangements for UG cable of 1 1 KV 40mm	Nos	10 00	356 78	3568
	10 3	Supplying and fixing L T cast iron pot heads suitable for 1 1 KV class UG cable filled with necessary bitumen/insulating compound complete with terminals clamps bolts, nuts and washers etc 25Sqmm	Nos	8 00	372 75	2982
	145/300/41 07	1.1 kV, LT Aerial Bunched Cable, confirming to IS-14255 1995 XLPE insulation Paramoter shall be as below 1 Hot Set Test a) Elongation under Load 50% (Max) b) Permanent Elongation After Cooloing 3% (Max) 2 Thermal Aging in oven a) Tensile Strength 16 N/mm^2 (Min) b) Elongation 375% (Min) 3 Water Absorption Test a) Water absorbed 0 5 mg/cm^2 (Max) 4 Carbon Black Content shall be ranging from 2% to 3% 3x25 + 1x25 + 1x16 Sqmm Street light (Insulated Messenger cum Neutral)	Mtrs	6 205	156555 00	971424
29	224/270/34 04	Stringing of 1 1 kV grade Aerial Bunched 3 Core cable of XLPE insulation of size (3x95) (Phase Conductor) + (1x70) (Insulated Messenger Neutral) + (1x25) (Street Light Control)	Mtrs	6 205	23929 49	148482
30	128/1/1 01	RCC Pole - 9 Mtr Long, 145 Kg WL	Nos	10 00	6664 77	66648
31	22/XIV/a	LT 2 Pin Cross Arm with clamps bolts, nuts & washers with braces - MS for RCC pole	Nos	80 00	291 81	23345
32	22/XIX/c	c) No 6 Strain Insulator	Nos	30 00	17 04	511
33	229/304/35 02	Laying of UG Cables by trenchless technology by adopting horizontal boring & Drawing of cable including preparation at site With HDPE Pipe i) Normal soil 5/6" bore size	Mtrs	30 00	903 12	27094
34	66/12.7/12 7.2	Supply of LED pole mounting type post top lantern with pressure die cast aluminium housing body for optimal thermal dissipation Lamp compartment comprising of anti glare clear diffuser with Injection moulded polycarbonate/clear glass material, delivering superior light output Rated life Burning Hrs 50000 hr @ Lumen Maintenance of 70% CCT > 5500K, IP 66 optical and electrical compartment & impact resistance of complete luminaire > IK08 Power Factor >0 9 with mains, Surge Protection- Min 5KV along with Over voltage/Overload, short circuit/ miss-wiring protection Compatible for pole mounting with outer dia of 40mm to 50mm Universal Voltage driver to operate wide voltage range from 100V to 270V 50/60Hz application Compliance to IS 10322/IEC 60598 LM 79 & LM 80 Adherence with RoHS UL approved MCPCB LEDEfficiency>130lm/w, nominal CRI >75 Luminaire manufacturer should have in house facility accredited by NABL/CPRI & any Government certified agency & Design & Development facility certified by ISO 9001 2008 Housing with supplier word mark /name shall be Engraved / Embossing on the die cast housing/ Body part Warranty of 2 Years against any manufacturing defect working under standard electrical conditions as mentioned above should be given by LED manufacturer & Cree/Nichia/ Lumileds/Osram make LED Source LED Post Top Lantern with 35 watts	Nos	75	6816 00	511200

Scanned by CamScanner

35	66/12 8 5	Supply of LED Streetlight luminaire with pressure die cast aluminium housing body for optimal thermal dissipation Lamp compartment comprising of anti glare clear diffuser with Injection moulded polycarbonate material, delivering superior light output Rated life Burning Hrs 50000 hr @ Lumen Maintenance of 70%, maximum light intensity should be between 60 degrees to 70 degrees CCT > 5500K, IP 66 optical and electrical compartment & impact resistance of complete luminaire > IK08. Power Factor >0 9 with mains. Surge Protection- Min 5KV along with Over voltage/ Overload, short circuit/ miss-wiring protection Compatible for pole mouting with outer dia of 40mm to 50mm Universal Voltage driver to operate wide voltage range from 100V to 270V 50/60Hz application. Compliance to IS 10322/IEC 60598, LM 79 & LM 80 Adherence with RoHS UL approved MCPCB Top access street light with single screw to ensure ease of maintenance at the sight site location with minimized minimal tools LED Light fixture with W System Powerconsumption LED Efficiency>130lm/w nominal	Nos	105	9798 00	1028790
36	67/12 9/12 9 3	Supply of LED floodlight luminaire with pressure die cast aluminium housing body for optimal thermal dissipation Lamp compartment comprising of anti glare clear diffuser with Injection moulded polycarbonate/clear glass material delivering superior light output Rated life Burning Hrs 50000 hr @ Lumen Maintenance of 70% CCT > 5500K IP 66 optical and electrical compartment & impact resistance of complete luminaire > IK08 Power Factor >0 9 with mains. Surge Protection- Min 5KV along with Over voltage/Overload, short circuit/ miss-wiring protection Compatible for pole mouting with outer dia of 40mm to 50mm Universal Voltage driver to operate wide voltage range from 100V to 270V 50/60Hz application Compliance to IS 10322/IEC 60598 LM 79 & LM 80 Adherence with RoHS UL approved MCPCB Top access street light with single screw to ensure ease of maintenance at the sight site location with minimized minimal tools LED Light fixture with W System Power consumption LED Efficiency>130lm/w nominal CRI >75 Luminaire manufacturer should have in house facility accredited by NABL/CPRI & any Government certified agency & Design & Development facility certified by ISO 9001 2008 Housing with supplier word mark /name shall be Engraved / Embossing on the die cast housing/ Body part	Each	6	9372	56232
37	13/4 2/4 2 1	Fabricating supplying and erection of Mtrs long hot dip Galvanized Octagonal pole with BSEN 10025 grade S 355 JO steel plate for shaft IS 2062 for base plate with door opening arrangements including suitable boards Bakelite sheet and MCBs as per IS specifications suitable to withstand the wind speed of 47 m/sec for Mtrs pole in single section and single joint welded as per IS 9595/IS 10178AWS having dimensions bottom mm top mm with 3mm thick, suitable base plate and 4Nos of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65micron as per ASTM-A123 and 153 etc (excluding foundation) as per drawing appended 3 meters - Top 70mm and bottom 136mm dia	Each	75	5708 40	428130
38	P/W/D C vil SR 2013-19	Earthwork excavation for foundation of buildings water supply,sanitary lines and electrical conduits either in pits or in trenches 1 5m and above in width in ordinary soil not exceeding 1 5 m in depth including dressing the bottom and sides of pits and trenches stacking the excavated soil clear from edges of excavation with lead upto 50m including breaking of clods complete as per specifications KSRB 2 1 1 - do-Ordinary soil	Cum	18.75	362 78	6802
39	P/W/D C vil SR 2013-19	KSRB 4 6 1 Providing and removing centering, shuttering, strutting, propping etc and removal of form work for foundations footings, bases of columns for mass concrete including cost of all materials, labour complete as per specifications (p NO 10 1 No 4 28)	Sqmtrs	32.4	291 26	9437

Providing LED Street lights / Poles / Control switches
in Ward no 12

Scanned by CamScanner

D Civil R 2018-19	KSRRB . Providing and laying in position plain cement concrete of nominal mix 1 4 8 with OPC @ 180Kgs with using 40 mm and down size graded granite metal coarse aggregates @0 85cum and fine aggregates @ 0 57cum mechine mixed concrete laid in layers not exceeding 15cm thick well compacted in foundation and plinth including cost of all materials ,labour,HOM machinaries ,curing complete as per specifications KBS 4.1.4 2	Cum	0.9275	6181 05	5795
WD Civil SR 2018-19	KSRB 4 9 2 : Providing T M .T steel reinforcement for R C C work including straightening, cutting, bending, hooking, placing in position lapping and I or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery omplete as per specifications. Specification No KBS 4 G 3 (12mm, 0 89kgm & 8mm, 0 39kg/m @ 150mm c/c)	Kgs	582.48	98 68	57481
PWD Civil SR 2018-19	Providing and laying cement concrete using 20 mm and down size granite coarse aggregates and fine aggregates of ready mixed concrete (RMC) M 20 for R C C works laid in 15 cms thick layers and well compacted vibrating curing for raft foundation column footing , main and secondary beams with all lead and lifts etc , complete (exclusive of cost of steel and fabrication charges)4 48	cum	8.1	6894.90	55849
					21558263
	Total Rs				2586991.526
	Add 12% GST				24145254.24
	Grand Total Rs				

CERTIFICATE :-

1. The place was inspected and the work is essential
2. The provision made in the estimate are adequate and necessary and the work comes in the BBMP limit and is legitimate Charges on the BBMP funds.
3. The estimate is based on KPWD (Ele) & Civil S R of 2019-20 /BESCOM SR2018-19

Junior/ Assistant Engineer (Ele)
Dasarahalli Zone

Assistant Executive Engineer (Ele)
Dasarahalli Zone

Executive Engineer (Ele)
Dasarahalli Zone, BBMP

Technically Sanctioned for Rs. 2,41,45,254/-
Rs. In Words: Two crore forty one lakh forty five thousand two hundred fifty four only
Under: Ety. for
Job Code No: Awaited as per Comm. Order Vide no ಮುಖ್ಯ/ಹಣ/93/2021-22, Dt. 06-07-2021
Registered as EIC No. 61 22-23 Subject to conditions contained in Enclosed Memo No. 61 2022-23 Dt. 07-07-22

AE/JE. TA EIC.

Scanned by CamScanner